

**REMARKS**

Applicants wish to thank the Examiner in charge of this application for the courteous and helpful interview given on December 12, 2002. During the interview, the Examiner stated that the claims were more likely to be allowed if claim 1 were amended to recite that the sterilized seeds are treated by application of an effective microorganism, since this more clearly indicates that the treating agent is the microorganism itself, rather than a substance, such as an antibiotic, produced by a microorganism. This change is accomplished by the foregoing amendment.

Reconsideration of this application, as amended, is respectfully requested.

The outstanding Office Action appears to substantially repeat the rejections made in the previous Office Action of April 16, 2002, indicating that the arguments raised against the rejections, as presented in the remarks of our Amendment of July 16, 2002, were not sufficient to overcome the rejections. However in a "Response to Arguments" on page 6 of the Office Action, reasons are given for deciding that the previously presented arguments against the rejections are not persuasive. It is submitted in this regard that these reasons are not convincing particularly with respect to the rejections of claims 1, 2, 5 - 9 and 14 which are solely based on anticipation by the prior art under 35 U.S.C. 102(a)

or (b), since in this type of rejection and in contrast with rejections under 35 U.S.C. 103 based on obviousness, all of the limitations of each claim have to be disclosed in a single reference.

In the second paragraph on page 6, the Office Action states as follows:

Examiner maintains that applicant's broad claim language does not distinguish over the teachings of the prior art. Applicant does not claim the order in which the treatment is conducted. Instead, Applicant merely claims that both sterilizing and microorganism are used as part of the method.

This statement appears to be in error since claim 1 recites that the seeds are sterilized by at least one of a physical and a chemical technique, and then recites that the thus sterilized seeds are treated by an effective microorganism. This clearly indicates that the seeds are first sterilized by a physical and/or chemical technique, and only then are treated with an effective microorganism. Furthermore, this is not merely arbitrary since it is apparent from the disclosure on pages 3 to 7 of the specification that the sequence of treatments is designed to improve the action of a physical or chemical treatment, e.g. the use of agrochemicals, in suppressing the harmful effects of pathogenic microorganisms. This would not be the result if the order of the treatments were reversed or the treatments were simultaneous since in that case, both the pathogenic and effective

microorganisms are likely to be destroyed by the physical or chemical treatment and the seeds would not be as well protected from future attack by pathogenic microorganisms.

The following is stated in the third paragraph of page 6 of the Office Action, with regard to the rejection on Cultural Management.

Examiner maintains that the antibiotics taught by Cultural Management teach that the antibiotic microbes are antagonists for other microbes and therefore are in fact effective microorganism.

There does not appear to be any accepted authority or basis for this statement. Rather, the reference to antibiotics as “antibiotic microbes” indicates that there may be a misunderstanding in the Office Action of the meaning of the term “antibiotics”. Thus, the universally accepted definition of “antibiotic” is as it appears in a standard U.S. dictionary, the Merriam Webster Collegiate Dictionary, 10<sup>th</sup> Edition, namely, “A substance produced by or a semisynthetic substance derived from a microorganism and able in dilute solution to inhibit or kill another microorganism”. This clearly excludes from the definition the microorganism or microbe itself. Furthermore, there is a functionally significant difference between an antibiotic and a microorganism since unlike antibiotics, which can be used as agrochemicals and are consumed in use, effective

microorganisms proliferate on their own and exert a lasting controlling effect, as pointed out on page 4, lines 16-19 of the specification.

Further regarding the rejections on Cultural Management, the Office Action states the following in the fourth paragraph of page 6.

Examiner maintains that Cultural Management teaches all the treatments claimed by applicant and the advantages of these treatments on plant development. It would have been obvious to one of ordinary skill in the art to apply all or one of the treatments taught by Cultural Management for the enhanced treatment and increased survival rate/production. Using one or more of the treatments simultaneously is merely a design choice based on economic and time parameters, seed specific, and the location/weather conditions where the seed will be planted. Prophylactic treatment is an integrated system of management to control disease and therefore commonly involves multiple treatment steps of varying techniques of treatment.

This statement apparently dismisses the detailed arguments presented by applicants against the effectiveness of Cultural Management as a prior art reference by taking the position that there is no invention in practicing any combination of the procedures disclosed regardless of any differences in the details of the overall

process or unobvious results obtained. It is submitted that this is not adequate to sustain the soundness of the rejections in view of applicants' arguments, particularly with regard to claims 1, 2, 5 - 9 and 14, since, as pointed out previously, the rejections of these claims are based on anticipation under 35 U.S.C. 102 rather than obviousness under 35 U.S.C. 103.

Finally, the last paragraph of page 6 of the Office Action states the following with regard to the rejection of claims 10 - 13 under 35 U.S.C. 103(a) as unpatentable over Cultural Management in view of Schisler et al.

Furthermore, examiner maintains that Schisler inherently teaches pelleting since the seed is a pellet and Schisler teaches the application of a dust or powder to the seed.

Applicants disagree with this interpretation of the term "pelleted" in claim 11. Thus, the U.S. dictionary cited above defines "pellet" used as a verb as the same as "pelletize" which in turn is defined as "to form or compact into pellets". Thus, as used in claim 11, the term "pelleted" means compacting smaller particles into larger ones and excludes the mere application of a dust or powder to the seed, as suggested in the Office Action.

It is noted that although the outstanding Office Action repeated the rejection of claims 1, 2, 5 - 7 and 9 - 14 under 35 U.S.C. 102(b) as being anticipated by Jackson, there was no attempt in the Response to Arguments on page 6 of the

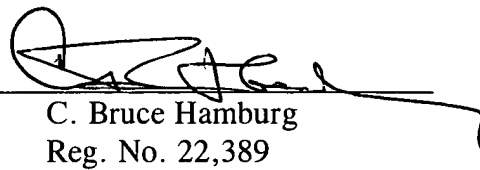
Office Action to reply to applicants' argument in the last Response that Jackson does not in fact disclose the sterilization of seeds by a physical and/or chemical technique and the treatment of the thus sterilized seeds by an effective microorganism. Thus, as pointed out in applicants' argument, the Clorox treatment disclosed at the bottom of col. 6 of Jackson is solely for the purpose of determining the bacteria count on the plant being treated; there is no suggestion that the Clorox treatment is intended to be followed by a treatment with a bacteriophage as an effective microorganism.

In the light of the foregoing arguments, this application is believed to be in condition for allowance, and such action at an early date is earnestly solicited.

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**APPENDIX I**

**AMENDED CLAIMS WITH AMENDMENTS INDICATED THEREIN  
BY BRACKETS AND UNDERLINING**

1. (Amended) A method of controlling a seed disease comprising the steps  
of:

sterilizing seeds by at least one of a physical technique and a chemical  
technique; and

treating the thus sterilized seeds by application of an effective  
microorganism which is antagonistic against a pathogen of a seed borne disease.